What is claimed is:

1. A motion estimator architecture for low bit rate communication comprising:

previous frame storing means for storing a previous search window data of a current macro block from a previous frame memory;

a current frame storing means for storing a current macro block data to find a motion vector in a current frame memory;

a multiplexer for multiplexing the previous search window data and the current macro block data to conform to data processing thereof;

data process means having a plurality of processing elements for calculating a mean absolute error (MAE) of the motion vector with the previous search window data and the current macro block data transmitted from the multiplexer;

comparing means for comparatively detecting the MAE of each motion vector from the data process means to detect a motion vector having a least MAE; and

state control means for controlling data flows between the above components.

2. The motion estimator architecture for low bit rate image communication as claimed in claim 1,

wherein the motion estimator estimates the motion vector using any of a full search method and an interlace search method according to image characteristics and a bit rate.

3. The motion estimator architecture for low bit rate image communication as claimed in claim 1;

wherein the motion estimator estimates a final motion vector by searching –8 ~ +8 integer-pixels to X and Y-axes to obtain an integer-pixel motion vector and then searching 9 half-pixels including the integer-pixel motion vector.

4. The motion estimator architecture for low bit rate image communication as claimed in claim 3,

wherein the motion estimator calculates a half-pixel motion vector by searching 9 integer-pixels and 3 half-pixels at the same time using 9 processing elements (PE) when searching the half-pixels.

5. The motion estimator architecture for low bit rate image communication as claimed in claim 3,

wherein the motion estimator detects the motion vector by searching both integer-pixels and half-pixels at the same time.

6. The motion estimator architecture for low bit rate image communication as claimed in claim 1,

wherein the motion estimator updates data which is not overlapped with the previous search window data when bringing the search window data of the current macro block from the previous frame storing means.

7. The motion estimator architecture for low bit rate image communication as claimed in claim 6,

wherein the motion estimator calculates addresses differently depending on that number of the update macro block is even or odd when estimating motion of the current macro block.